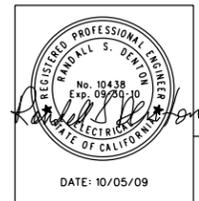


SYMBOL	DESCRIPTION
ONE LINE DIAGRAMS-1	
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
	FUSE, CURRENT RATING AND QUANTITY INDICATED
	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
	ELECTRONIC STARTER/SPEED CONTROL
	RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
	KEY INTERLOCK
	SURGE ARRESTER (GAP TYPE)
	CAPACITOR - KVAR INDICATED, 3 PHASE
	MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
	GENERATOR, KW/KVA RATING SHOWN
	ANALOG METER WITH SWITCH-SCALE RANGE SHOWN
	V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR
	DIGITAL POWER METER (MULTIFUNCTION)
	UTILITY REVENUE METER
	GROUND
	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS, RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
	TRANSIENT VOLTAGE SURGE SUPPRESSOR

SYMBOL	DESCRIPTION
ONE LINE DIAGRAMS-2	
	DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE
	NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE
	DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE
	MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW
	SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE
	SWITCH W/ARCING HORNS, MEDIUM VOLTAGE
	DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE
	SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE
	GROUND SWITCH, GANG OPERATED
	TERMINAL BLOCK LUG
	DELTA CONNECTION
	WYE GROUNDING CONNECTION, SOLID GROUND
	WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION
	RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED
	CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED
	BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED
	MOTOR OPERATOR, BREAKER OR SWITCH
	ENERGY MONITORING UNIT
	MOTOR PROTECTION RELAY
	BREAKER TRIP COIL (BELL ALARM)
	BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED
	CONTACTOR, MAGNETIC, NEMA SIZE INDICATED
	STARTER, MAGNETIC NEMA SIZE INDICATED
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
NOTES:	
1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.	
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.	

SYMBOL	DESCRIPTION																		
CONTROL DIAGRAMS-1																			
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN																		
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED																		
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK																		
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT																		
	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:																		
	<table border="1"> <thead> <tr> <th rowspan="2">CKT</th> <th colspan="3">POSITION</th> <th rowspan="2">X - CLOSED CONTACT O - OPEN CONTACT</th> </tr> <tr> <th>HAND</th> <th>OFF</th> <th>REMOTE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>X</td> <td>O</td> <td>O</td> <td></td> </tr> <tr> <td>2</td> <td>O</td> <td>O</td> <td>X</td> <td></td> </tr> </tbody> </table>	CKT	POSITION			X - CLOSED CONTACT O - OPEN CONTACT	HAND	OFF	REMOTE	1	X	O	O		2	O	O	X	
CKT	POSITION			X - CLOSED CONTACT O - OPEN CONTACT															
	HAND	OFF	REMOTE																
1	X	O	O																
2	O	O	X																
	TOGGLE SWITCH, ON-OFF TYPE																		
	SELECTOR SWITCH, ON-OFF TYPE																		
	MUSHROOM HEAD SWITCH																		
	INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR																		
	INDICATING LIGHT - LETTER INDICATES COLOR																		
	A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE																		
	ELAPSED TIME METER																		
	MOTOR STARTER CONTACTOR COIL																		
	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT																		
	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT																		
	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT																		
	CONTACT - NORMALLY OPEN																		
	CONTACT - NORMALLY CLOSED																		
	REMOTE DEVICE																		
	TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSING WHEN ENERGIZED AND TIMED OUT																		
	TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT																		
	TIME DELAY RELAY CONTACT, CLOSING WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT																		
	TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSING WHEN DE-ENERGIZED AND TIMED OUT																		
	MOTOR SPACE HEATER																		
	TERMINAL BLOCK, REMOTE																		
	TERMINAL BLOCK, INTERNAL																		
	FUSED TERMINAL BLOCK																		
	FUSE, RATING INDICATED																		
	TRANSFORMER, CONTROL POWER																		
	THERMOCOUPLE																		

SYMBOL	DESCRIPTION
CONTROL DIAGRAMS-2	
	CAPACITOR
	BATTERY
	LIMIT SWITCH, NORMALLY OPEN, CLOSING AT END OF TRAVEL
	LIMIT SWITCH, NORMALLY CLOSED, OPENS AT END OF TRAVEL
	TEMPERATURE SWITCH, OPENS ON TEMPERATURE RISE
	TEMPERATURE SWITCH, CLOSING ON TEMPERATURE RISE
	FLOAT SWITCH, NORMALLY OPEN, CLOSING ON DESCENDING LEVEL
	FLOAT SWITCH, NORMALLY OPEN, CLOSING ON RISING LEVEL
	PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE
	PRESSURE SWITCH, NORMALLY OPEN, CLOSING ON RISING PRESSURE
	FLOW SWITCH, CLOSING ON INCREASED FLOW
	FLOW SWITCH, OPENS ON INCREASED FLOW
	NEUTRAL GROUND CURRENT LIMITING RESISTOR
	CALIBRATING RESISTOR
	TACHOMETER GENERATOR
	GFS/GFR
	FLASHER
	SEALED CONTACT
	BUZZER
	POTENTIOMETER
	RESISTOR
	BLOWN FUSE INDICATOR
	COAXIAL CABLE
	MULTICONDUCTOR SHIELDED CABLE
	DUPLEX RECEPTACLE
	RELAY, WITH MECHANICAL LATCH
	FULLWAVE DIODE BRIDGE (AC TO DC)
	BREAKER TRIP COIL (BELL ALARM)



EASTERN MUNICIPAL WATER DISTRICT PERRIS DESALINATION FACILITY PERRIS, CALIFORNIA	
ELECTRICAL LEGEND	
SHEET 2	
DESIGNED BY: A. MATHES	DRAWN BY: A. GORDEN
CHECKED BY: R. DENTON	
U.S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS	
ART JUNG, P.E. CHIEF, DESIGN BRANCH	
SUBMITTED BY:	CADD FILE NAME: PDF.g021d.dgn
L.A. DISTRICT FILE NO. XXX-XXXX	SPEC. NO. : NOT APPLICABLE
SHEET 21 OF 226 SHEETS	
G-21	
DATE: 10/05/09	